Information for Alliance Promotion chipset users

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1. Support chipsets

The apm driver in the SVGA server is for Alliance Promotion graphics chipsets. The following chipsets are supported:

- 6422

  Old chipset. The driver is still very unstable, including computer crashes. You would prefer using XFree86 3.3.x for this chipset.

- AT24

  As found in Diamond Stealth Video 2500. Quite similar to AT3D.

- AT25, AT3D

  AT3D is found in Hercules Stingray 128/3D. Most other Voodoo Rush based cards use the AT25 which is identical except it doesn't have the 3D stuff in it.

2. Acceleration

The apm driver uses the XAA (XFree86 Acceleration Architecture) in the SVGA server. It has support for the following acceleration:

- Bitblts (rectangle copy operation)
- Lines (solid, single pixel)
- Filled rectangles
- CPU->Screen image transfers.
- CPU->Screen colour expansion (text accel).
- Screen->Screen colour expansion (cached text accel).
- Mono 8x8 pattern fill. Not for 6422.
- Colour 8x8 pattern fill (in 8bpp). Not for 6422.
- Hardware cursor.

- Pixmap caching.

All in 8, 16 and 32 bpp modes. In 24bpp mode only Bitblts and Filled rectangles is supported. Also VESA DPMS power save mode is fully supported with "standby", "suspend" and "off" modes (set with with the "xset dpms" command).

3. DGA

Full DGA 2.0 support with framebuffer access and drawing acceleration.

4. Video

A limited hardware support for video decoding on AT24 and AT25/3D. It can display an image in YUV colours inside the desktop. There are some more exotic formats (YUV 4.1.1, YUV 4.0.0, RGB 8,16.32bpp).

5. Shadow framebuffer

There is a mode, called shadow framebuffer, where the graphics is only used to display the images. All rendering is done in memory in a so-called shadow framebuffer. This mode is useful if you need lots of reading in the video memory. You will have to put

```
Option "ShadowFB"
```

in your XF86Config file.

6. Configuration

First: Please run the xf86config program to create a correct configuration.

You can turn off hardware cursor by inserting the following line in the Device section of the XF86Config file:

```
Option "SWcursor"
```

Or turn off hardware acceleration:

```
Option "noaccel"
```

Or turn off MMIO

```
Option "nolinear"
```

Please don't specify the amount of video RAM you have or which chipset you have in the config file, let the driver probe for this. Also please don't put any "clocks" line in the device section since these chips have a fully programmable clock that can take (almost) any modeline you throw at it. It might fail at some specific clock values but you should just try a slightly different clock and it should work.

7. glide2x

There is support for the XF86Rush extension for use with the glide2x library.

8. Questions

Any questions regarding this driver should be sent to Loïc Grenié. It should be possible to add support for the 3210 chipset if someone needs it.

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$XFree86: xc/programs/Xserver/hw/xfree86/doc/sgml/apm.sgml,v 1.3 2000/03/08 05:38:43 dawes Exp $